

**REMARKS**

Claims 47-104 are pending in the present application. Applicants appreciate the recognition of patentable subject matter defined by claims 59, 63, 68, 76, 82 and 88.

Claims 53-58, 60-62, 64-67, 69-75, 77-81 and 83-87 stand rejected under 35 U.S.C. §103(a) for obviousness over U.S. Patent No. 6,107,910 to Nysen. Claim 53 has been objected to. Claims 53-88 stand rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-59 U.S. Patent No. 6,192,222.

Applicants respectfully traverse the rejections and urge allowance of the present application.

Independent claim 53 defines a communication system comprising, in part, a communication device configured to receive a continuous wave signal and to output a modulated continuous wave signal and an interrogator configured to reduce an amplitude of a component of the modulated continuous wave signal having a frequency of the continuous wave signal. Claim 53 recites patentable subject matter over the prior art of record.

The Nysen patent provides a system of providing a *non-stationary* radio frequency emission and receiver system as specifically recited in column 4, lines 38-40 of the summary of the invention section. Referring to column 38, lines 4-14 of the Nysen patent with reference to Fig. 49 thereof, a carrier oscillator generates a stable carrier at about 900 MHz. In accordance with the Nysen



invention, *the carrier is mixed with the output of a non-stationary signal generator 602 in a mixer 601.* The non-stationary mixed signal from mixer 601 is transmitted as a *905-925 MHz band signal* from antenna 604. It is stated that the transmitted signal potentially interacts with different types of transponders.

Applicants submit herewith the dictionary definition of "continuous wave" as *a wave that maintains a constant amplitude and a constant frequency.* The Nysen patent clearly relates to a communication system utilizing *non-stationary signals* communicated using antenna 604. As specified in the abstract of the Nysen patent, the Nysen system emits a non-stationary interrogation signal and decodes a phase modulated backscatter signal and the RF tag reader system follows the phase of the backscatter signal avoiding interference from nulls in the received signal waveform due to the non-stationary interrogation signal, relative movement or environmental effects. Applicants have electronically searched the Nysen document and have failed to uncover any continuous wave teachings.

Accordingly, and with reference again to claim 53, the Nysen patent fails to teach or suggest a communication device configured to receive a *continuous wave signal* and to output a *modulated continuous wave signal* and an interrogator configured *to reduce an amplitude of a component of the modulated continuous wave signal* as specifically defined in claim 53. Claim 53 recites limitations not shown or suggested in the prior art of record. In fact, the Nysen patent teaches away from the limitations of claim 53 inasmuch as it specifically discloses a non-stationary communications system. Claim 53 is allowable for at

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least these reasons.

In addition, there is no motivation to modify the teachings of the Nysen patent. Referring to MPEP §2146(j)(3), there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine reference teachings. The mere fact that references *can* be combined or modified does not render the resultant combination obvious *unless the prior art also suggests the desirability of the combination*. MPEP §2143.01 citing *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

The Office Action is devoid of providing clear and particular motivation to support the obviousness rejection of claim 53. The Nysen patent refers to non-stationary communications systems. There is absolutely no motivation for one of ordinary skill in the art to modify the reference teachings concerning a non-stationary system to arrive at Applicants' invention defined in claim 53. The 103 rejection of claim 53 is improper without the requisite clear and particular motivation and the 103 rejection is improper for at least this additional reason. Applicants respectfully request allowance of claim 53 for at least the above compelling reasons.

The claims which depend from independent claim 53 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, claim 57 recites adjusting at least one of an amplitude and a phase of the continuous wave signal and combining the adjusted continuous wave signal with the modulated continuous wave signal. Claim 57 is allowable over the prior art of record.

Referring to page 3 of the Office Action, it is stated that Nysen discloses a plurality of local signals differing in phase are mixed with the received backscatter signal. According to the rejection, such teachings allegedly disclose the adjusting and combining limitation of claim 57. Applicants disagree.

Claim 57 recites adjusting at least one of amplitude and a phase of the continuous wave signal and combining the adjusted continuous wave signal with the modulated continuous wave signal. The mixing of the received signal with local signals fails to teach or suggest combining an adjusted continuous wave signal as specifically defined in claim 57. The Office Action appears to assert that the mixing steps disclose both the adjusting and the combining defined in claim 57. Claim 57 recites adjusting the continuous wave signal and combining *the adjusted* continuous wave signal with the modulated continuous wave signal. Accordingly, the continuous wave signal is adjusted and the adjusted continuous wave signal is combined as specifically defined in claim 57. The mixing operation fails to teach or suggest the defined adjusting and combining as claimed. Claim 57 is patentable over the prior art of record for at least this additional reason.

Referring to claim 58, it is defined that the modulated continuous wave

signal comprises a data portion and the interrogator is configured to adjust the continuous wave signal before reception of the data portion. The Office Action is entirely devoid of identifying any teachings of the prior art which allegedly correspond to limitation of claim 58. Referring to Fig. 49, an entirety of received signal is mixed in I and Q mixers 606, 607. Such mixing of an entirety of the signals fails to teach or suggest adjustment of a continuous wave signal before reception of a data portion as specifically defined in claim 58. Positively recited limitations of claim 58 are not shown or suggested in the prior art of record and claim 58 is allowable for at least additional reason.

Independent claim 60 defines an interrogator, comprising, in part, a receiver configured to receive a continuous wave signal and a modulated continuous wave signal and to reduce an amplitude of a component of the modulated continuous wave signal having the frequency of the continuous wave signal using the continuous wave signal. Claim 60 recites patentable subject matter over the prior art of record.

As defined above, a continuous wave signal has a constant frequency. The Nysen patent is directed towards a non-stationary system utilizing signals within a 905-925 MHz band. Accordingly, Nysen fails to teach or suggest the claimed *receiver configured to receive the continuous wave signal and the modulated continuous wave signal and to reduce an amplitude of a component of the modulated continuous wave signal using the continuous wave signal*. Claim 60 recites patentable subject matter over the prior art of record and is in

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condition for allowance for at least this reason.

The claims which depend from independent claim 60 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 64 recites an interrogator comprising, in part, a receiver configured to adjust a local signal responsive to a communication signal and to reduce an amplitude of a component of the communication signal having a first frequency using the adjusted local signal while substantially maintaining an amplitude of another component of the communication signal having another frequency. Claim 64 recites patentable subject matter over the prior art of record.

Referring to Fig. 49 of Nysen, a reference local oscillator 634 is depicted coupled with element 605 which continually adjusts the signal. However, the Nysen patent fails to disclose or suggest *adjustment of a local signal responsive to a communication signal and to reduce an amplitude of a component of the communication signal using the adjusted local signal* as specifically recited in claim 64. The adjustment of the signal provided by reference 605 is continuous and is not responsive to a communication signal. Further, no reduction of amplitude of a component of a communication signal using such an adjusted local signal is disclosed or suggested in the Nysen patent. The Nysen patent fails to teach or suggest positively recited limitations of claim 64. Claim 64 is allowable for at least this reason.

The claims which depend from independent claim 64 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Independent claim 70 defines a communication method comprising, in part, communicating a continuous wave signal, communicating and receiving a modulated continuous wave signal, and reducing an amplitude of a component of the modulated continuous wave signal having the frequency of the continuous wave signal after the receiving while substantially maintaining an amplitude of a component of the modulated continuous wave signal having a frequency different than the frequency of the continuous wave signal. Claim 70 recites patentable subject matter over the prior art of record.

The Nysen patent refers to a non-stationary system which utilizes signals within the 905-925 MHz band. The Nysen patent fails to teach or suggest *communicating a continuous wave signal and communicating a modulated continuous wave signal responsive to the continuous wave signal* as claimed. Further, the Nysen patent fails to teach or suggest reducing an amplitude of a component of the modulated continuous wave signal as positively recited in claim 70. Claim 70 recites limitations not shown or suggested in the prior art of record and is in condition for allowance for at least this reason.

The claims which depend from independent claim 70 are in condition for allowance for the reasons discussed above with respect to the independent claim

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as well as for their own respective features which are neither shown nor suggested by the cited art.

Independent claim 77 recites a communication method comprising, in part, providing a continuous wave signal, modulating the continuous wave signal providing a modulated continuous wave signal to communication information and reducing an amplitude of a component of the modulated continuous wave signal having a frequency of the continuous wave signal while substantially maintaining an amplitude of another component of the modulated continuous wave signal having another frequency. Claim 77 is allowable.

The prior art of record fails to teach or suggest *providing a continuous wave signal and modulating the continuous wave signal providing a modulated continuous wave signal to communicate information*. The Nysen patent discloses a non-stationary system for implementing communications. Positively recited limitations of claim 77 are not shown or suggested in the prior art and claim 77 is in condition for allowance.

The claims which depend from independent claim 77 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Independent claim 83 defines a communication method comprising, in part, providing a local signal, receiving a communication signal and reducing an amplitude of a first component of the communication signal while substantially





maintaining an amplitude of a second component of the communication signal, the reducing comprising adjusting the local signal responsive to the communication signal and combining the communication signal and the local signal after the adjusting. Claim 83 recites patentable subject matter over the prior art of record.

The Nysen patent fails to teach or suggest reducing an amplitude of a first component of a communication comprising adjusting a local signal *responsive to the communication signal* and combining the communication signal and the local signal after the adjusting as defined in claim 83. Positively recited limitations of claim 83 are not shown or suggested in the prior art and claim 83 is allowable for at least this reason.

The claims which depend from independent claim 83 are in condition for allowance for the reasons discussed above with respect to the independent claims as well as for their own respective features which are neither shown nor suggested by the cited art.

Claim 53 has been amended as indicated above and Applicants request withdrawal of the objection.

Applicants submit herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,192,222. Applicants respectfully request withdrawal of the obviousness-type double patenting rejection of the claims.

In the event that a rejection of the claims is maintained with respect to the prior art, or a new rejection made, Applicants respectfully request identification

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in such asserted references of elements which allegedly correspond to limitations of the claims in accordance with MPEP §706 and 37 C.F.R §1.104(c)(2). In particular, 37 C.F.R §1.104(c)(2) provides that *the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.*

Referring to 37 C.F.R. §1.104(c)(2), it is stated that the Examiner must cite the best references at their command. When a reference is complex or shows or describes inventions other than that claimed by Applicants, the particular teachings relied upon must be designated as nearly as practicable. The pertinence of each reference if not apparent must be clearly explained for each rejected claim specified.

Applicants add new claims 89-104. New claim 104 corresponds to the reasons for allowance indicated in paragraph 5 on page 4 of the Office Action and is believed to be in condition for allowance.

Applicants enclose herewith a copy of an IDS and form PTO-1449 timely filed with application. Applicants request initialization of the references thereon and return of the initialed PTO-1449 to Applicants.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

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Appl. No. 09/757,763

Respectfully submitted,

Dated: \_\_\_\_\_

9/19/01

By: \_\_\_\_\_



James D. Shaurette  
Reg. No. 39,833

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Inventor ..... Roy Greeff et al.  
Assignee ..... Micron Technology, Inc.  
Group Art Unit ..... 2682  
Examiner ..... D. Nguyen  
Attorney's Docket No. .... MI40-321  
Title: "A Communication System, Interrogators and Communication Methods"

VERSION WITH MARKINGS TO SHOW CHANGES MADE ACCOMPANYING  
RESPONSE TO JUNE 19, 2001 OFFICE ACTION

In the Claims

The claims have been amended as follows. Underlines indicate insertions and ~~strikeouts~~ indicate deletions.

53. (Amended) A communication system comprising:

a communication device configured to receive a continuous wave signal and to output a modulated continuous wave signal responsive to the receiving; and

an interrogator configured to reduce an amplitude of a component of the modulated continuous wave signal having ~~the~~ a frequency of the continuous wave signal while substantially maintaining an amplitude of another component of the modulated continuous wave signal having another frequency.

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64. (Amended) An interrogator comprising:

a receiver configured to receive a local signal and a communication signal, the receiver being further configured to adjust the local signal and to reduce an amplitude of a component of the communication signal responsive to the communication signal having a first frequency using the adjusted local signal while substantially maintaining an amplitude of another component of the communication signal having another frequency.

77. (Amended) A communication method comprising:

providing a continuous wave signal;

modulating the continuous wave signal providing a modulated continuous wave signal to communicate information;

receiving the modulated continuous wave signal; and

after the receiving, reducing an amplitude of a component of the modulated continuous wave signal having a frequency of the continuous wave signal while substantially maintaining an amplitude of another component of the modulated continuous wave signal having another frequency.

83. (Amended) A communication method comprising:

providing a local signal;

receiving a communication signal; and

after the receiving, reducing an amplitude of a first component of the communication signal while substantially maintaining an amplitude of a second

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component of the communication signal, the reducing comprising adjusting the local signal responsive to the communication signal and combining the communication signal and the local signal after the adjusting.

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